

04. *Memo*
December 4, 1959

Dear Rod:

Ed has asked that I send to you coefficient of friction measurements of thin-base film emulsion and pelloid. The attached data were taken from an experimental coating of a thin-base film. Therefore, they may not be precisely correct for a special product you may require but should give you an order of magnitude.

There are two coefficient of friction tests used by us. One test used primarily to measure the static coefficient uses a flat block 11.0 square centimeters in area and a load of 3.07 grams/cm². The film is fastened to the block with the test surface out. The block is then placed on the test material and the force required to start the block in motion is measured by means of an electronic strain gage. From these data the static coefficient of friction is calculated. After the block starts to move it is pulled at a constant speed of 0.572 in. per minute and the force required is recorded. These data give a kinetic coefficient under a very light load moving very slowly.

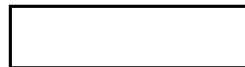
The other test used primarily for determining kinetic coefficient uses a much smaller contact area (0.45 cm²) and a much higher normal force (675.0 grams/cm²). This block is pulled at 57.8 inches per minute over the test surface.

Triplicate determinations were made for each variable. The agreement among the three determinations per variable was good and the average values are given in the attached table. All of these measurements were made at 70° F-50% RH.

We hope these data will be useful to you.

JSM/MDG

cc: L.W. ✓



Attachment removed
25X1

DEC 7 4 17 PM '59